TORRENS UNIVERSITY AUSTRALIA

ASSESSMENT 3 BRIEF	
Subject Code and Title	MIS602 Data Modelling and Database Design
Assessment	Database Case Study Report
Individual/Group	Group
Length	N/A
Learning Outcomes	The Subject Learning Outcomes demonstrated by successful completion of the task below include: a) Examine the role of data in an organisation, and develop solutions related to the creation, storage and management of organisational data. b) Design solutions applying relational database techniques to complex problems and communicate these solutions to all stakeholders. c) Apply contemporary database modelling to identify and address anomalies in data and recommend solutions.
Submission	Due by 11:55pm AEST/AEDT Sunday end of Module 6.1
Weighting	35%
Total Marks	100 Marks

Task Summary

This final assessment requires you to produce a robust and a flexible database that is able to accurately store information about the business mentioned in the case study. You also need to develop the queries and reports to provide data insights which in turn drive business decisions. Your submission should include:

a) Appropriate modelling plus any business rules or assumptions
b) SQL commands to
   - physically implement your logical model
   - populate the database
   - retrieve meaningful information
c) Visualizations that can be presented at a board meeting

Context

This assignment brings together all the learning gained over the duration of this subject. The skills and knowledge you've gained in this subject forms a vital part of your ability to traverse the major disciplines in the data and database fields. You will be able to interact with analysts, developers, database administrators and managers using a common language which is vital if an organization is to function effectively. These skills are the groundwork for further career progression in data analysis and information management.

Task Instructions

1. Group Formation and Registration

- Form groups of 3 members.
- The deadline for team registration is 11:45pm AEST Friday end of Module 2.2

- To register your team, you are required to send your Learning Facilitator an email with "[MIS602] Group Registration" in the subject line. In the body of that email, please list the names and student ID numbers of all the members of your team.
- You are required to send the registration email to your facilitator before the registration deadline.
- After the registration deadline, those students who are not in a team will be allocated to a group by the Learning Facilitator.

2. Case Study
Please read the attached MIS602_Assessment 3_Case Study.

3. Please watch the attached MIS602_Software Assets Management: Industry Insights_Interview.

4. Database Case Study Report
Based on the information provided in the case study and the video interview, create a functioning IT asset database that can be queried to meet the requirements of the business.

5. The database case study report should include the following elements:

a) ER diagram, relational model and associated business rules and assumptions

b) SQL commands to:

- Create tables
- Insert sample data rows into each table
- SQL queries to provide business insights
  At least one of each of the following is required:
  - SELECT query with a condition
  - GROUP BY query
  - JOIN query
  - NESTED query

  For each query explain its business value i.e. What business question does the result answer? E.g. How many staff have more than one laptop? How will the business use the output of this query? E.g. The company can save money by ensuring staff have only one laptop each

  Please note that the questions will be of your design.

c) At least two visualizations with an explanation of its business value.
For each visualization explain its business value. E.g. Does the visualization highlight savings in time or money or both or potential anticipate future expense which can then be budgeted for?

Referencing

It is essential that you use appropriate APA style for citing and referencing research. Please see more information on referencing here http://library.laureate.net.au/research_skills/referencing

Submission Instructions

Submit Assessment 3 via the **Assessment** link in the main navigation menu in MIS602 Data Modelling and Database Design. The Learning Facilitator will provide feedback via the Grade Centre in the LMS portal. Feedback can be viewed in My Grades.

Academic Integrity Declaration

We declare that except where we have referenced, the work we are submitting for this assessment task is our own work. We have read and are aware of Torrens University Australia Academic Integrity Policy and Procedure viewable online at http://www.torrens.edu.au/policies-and-forms
We are aware that we need to keep a copy of all submitted material and their drafts, and we will do so accordingly.

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Assessment Rubric

Assessment Criteria	Fail (Unacceptable) 0-49%	Pass (Functional) 50-64%	Credit (Proficient) 65-74%	Distinction (Advanced) 75 -84%	High Distinction (Exceptional) 85-100%
ER diagram ***Relational model*** ***Associated business rules and assumptions*** ***30%***	Limited entities and relationships identified. Limited entities converted to tables. No list of assumptions/ business rules.	Most entities identified and labelled. Most relationships identified. Identified Entities converted to tables. Most fields listed. Design is in third normal form. List of assumptions/business rules.	All entities identified and labelled. All relationships identified. Most cardinality is correct. Most participation is correct. All entities converted to tables. All fields listed. Most many-to-many relationships deconstructed into new tables. Primary keys correctly underlined.	All relationships meaningfully labelled. Primary key labelled for entities. All cardinality is correct. All participation is correct. All many-to-many relationships deconstructed into new tables. Foreign keys correctly underlined.	Primary keys labelled for many-to-many relationships Some non-key fields labelled. Any multi-valued attributes deconstructed into new tables. Any self-joins identified. Well-presented ER diagram, relational model, associated business rules and assumptions.
SQL commands ***45%***	Limited number of queries provided and queries do not meet the criteria. Business statements value not provided.	Create table DDL SQL provided. Data insert DML SQL provided. Minimum number of queries provided and queries meets the criteria. Business statements value provided.	Queries exhibit extra detail e.g. column headers concatenation sorting.	Additional queries provided. Queries exhibit extra detail e.g. advanced filtering calculations join with more than two tables.	Additional queries provided. All SQL is well formatted. Overall, well presented.
Visualisation with an explanation ***25%***	Minimum visualisations provided with no business value statements.	Minimum visualizations provided. Business value statements provided	Axes well labelled. Legends well labelled. One visualization is an aggregation.	Additional visualization provided. Additional features utilized e.g. calculations	Additional visualization provided. Overall, well presented visualisation with an explanation.